

REMARKS

Upon entry of the present amendment, claims 1-4 and 8-18 will have been amended, and claims 5-7 will have been cancelled without prejudice to or disclaimer of the subject matter recited therein. In view of the herein-contained amendments and remarks, Applicants respectfully submit that each of the claims now pending is allowable under 35 U.S.C. §101, 35 U.S.C. §102, 35 U.S.C. §103 and 35 U.S.C. §112, second paragraph.

Initially, Applicants would like to thank the Examiner for acknowledging consideration of each of the references cited by Applicants in the Information Disclosure Statement filed on May 22, 2002. Applicants would also like to thank the Examiner for indicating acceptance of the drawings filed with the present Application on the International filing date of August 25, 1999.

As another initial matter, Applicants note that, on the Office Action Summary form (PTOL-326), the Examiner indicates that claims 5, 7, 8 and 17 are allowed and claims 9, 13 and 14 are objected to. However, in the Office Action, the Examiner rejects each of these claims. Applicants respectfully request clarification by the Examiner.

In the outstanding Official Action, claims 4, 9 and 14 were objected to for informalities. Claim 4 will have been amended to specify that the term "ARAM" is an acronym for "Adaptive Resonance Associative Map". Claim 9 will have been amended to delete the term "or". Claim 14 will have been amended to replace the term "mis-directed" with the word "misdirected". In view of the above-noted amendments, Applicants respectfully request reconsideration and withdrawal of each of the objections to the claims.

In the Office Action, the Examiner rejected claims 1-4, 6, 10-12, 15, 16 and 18 under

35 U.S.C. §101. Applicants traverse the rejection for at least the following reasons.

Claims 1-4, 6 and 8-18 have been amended to recite a "computer implemented document classification apparatus", as suggested by the Examiner. Applicants have also amended claims 13 and 14 to recite a "system administrator workstation", support for which may be found, for example, in Figure 1 of the drawings. Applicants submit that the amendments to claims 1-4, 6 and 8-18 should not be considered an indication of Applicants' acquiescence to the propriety of the rejection of claims under 35 U.S.C. §101. In this regard, there is no question under the law that claims directed to an "apparatus" are directed to more than a mere "abstract idea". Nevertheless, Applicants have amended claims 1-4, 6 and 8-18 as noted above merely to expedite prosecution of the present application. In view of the amendments to claims 1-4, 6 and 8-18, Applicants respectfully request reconsideration and withdrawal of each of the outstanding rejections under 35 U.S.C. §101.

In the Office Action, the Examiner rejected claim 18 under 35 U.S.C. §112, second paragraph, asserting that there was insufficient antecedent basis for the recitation "threshold". Applicants respectfully traverse the rejection of claim 18. In this regard, claim 18 has been amended to depend from claim 17. In view of the above-noted amendment to claim 18, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 18.

The Examiner rejected claims 1, 5-7, 10-12, 16 and 17 under 35 U.S.C. §102(e) as being anticipated by REGISTER et al. (U.S. Patent No. 5,371,807). Applicants respectfully traverse the rejection for at least the following reasons.

Applicants' independent claim 1 recites a computer implemented document

classification apparatus which, includes, inter alia, a feature extractor that extracts features from a document, a classifier operable on the extracted features to process the document in a knowledge acquisition mode in which the association of a classification with the document is added incrementally to a knowledge base, and a router. Claim 1, as currently amended, also recites that the classification is associated with a confidence value which is comparable to a threshold, and the router is arranged to make at least one of an automatic routing and a manual routing decision in dependence upon the comparison. These features were previously recited in claim 7 (now canceled). Applicants respectfully submit that Register does not disclose at least these features.

To support the rejection of claim 7, the Examiner asserted that col. 15, lines 40-59 of Register discloses a classification associated with a confidence value comparable to a threshold, where a router is arranged to make an automatic routing or manual decision in dependence upon the comparison. Applicants strongly disagree.

Applicants respectfully submit that Register fails to disclose (or even suggest) that the classification of a document has an associated confidence value which is comparable to a threshold value. Although Register discloses, in col. 5, lines 48-50, that "[t]he module 36 determines profile weights and combines the profile weights to arrive at similarity scores for all the categories", Register then goes on to disclose, in col. 5, lines 56-59, that "[t]he categories whose similarity scores are above the threshold are compiled into a list and are passed to the next module or directly to the external application." Applicants respectfully submit that, since all of Register's categories are compared with the threshold, and those which have similarity scores which are above the threshold are passed (to the next module or external application), no classification of the document has yet been determined.

Applicants submit that this processing is merely a comparison of the similarity score for each of the possible categories the document could be with a threshold. Thus, Applicants submit that Register does not disclose comparing a confidence value of a classification of a document with a threshold, as recited in Applicants' independent claim 1.

As Register does not disclose comparing a confidence value of a classification of a document with a threshold, Applicants respectfully submit that Register certainly does not disclose a router arranged to make an automatic routing or manual routing decision in dependence on such a comparison, as recited in Applicants' independent claim 1.

For at least these reasons, Applicants respectfully submit that the 35 U.S.C. §102(e) rejection of independent claim 1 is improper, and respectfully request withdrawal of the rejection and allowance of the claim.

Dependent claims 10-12 and 16 are also submitted to be in condition for allowance for at least the reasons set forth above with respect to independent claim 1.

Applicants' independent claim 17 recites a computer implemented document classification apparatus which includes, inter alia, a router arranged to compare a confidence value to a threshold and make a decision to route a document automatically to one of a plurality of destinations or to a destination for manual routing in dependence upon the comparison. As discussed above, Register fails to disclose these features.

For at least these reasons, Applicants respectfully submit that the 35 U.S.C. §102(e) rejection of independent claim 17 is also improper, and respectfully request withdrawal of the rejection and allowance of the claim.

In the Office Action, claims 2, 3 and 4 were rejected under 35 U.S.C. §103(a) over REGISTER in view of AH-HWEE TAN, ("Adaptive Resonance Associative Map", Neural

Networks, Vol. 8, No. 3, pp.437-446, 1995) (hereinafter referred to as TAN). Claims 8 and 18 were rejected under 35 U.S.C. §103(a) over REGISTER in view of AH-HWEE TAN and TEO C. ("Learning User Profiles for Personalized Information Dissemination, Neural Networks Proceedings", 1998, IEEE World Congress on Computational Intelligence, the 1998 IEEE International Joint Conference on Volume 1, 4-9 May 1998, pp.183-188, volume 1) (hereinafter referred to as PROFILE LEARNING). Claims 9 and 13 were rejected under 35 U.S.C. §103(a) over REGISTER in view of ALAM (U.S. Patent No. 6,104,500). Claim 14 was rejected under 35 U.S.C. §103(a) over REGISTER in view of REGISTER and KANNAN, N. ("A Hybrid Architecture for Text Classification, Tools with Artificial Intelligence", 1992, TAI '92, Proceedings, Fourth International Conference on 10-13 Nov. 1992, pp. 286-292)(hereinafter referred to as TEXT CLASSIFICATION). Claim 15 was rejected under 35 U.S.C. §103(a) over REGISTER in view of AH-HWEE TAN ("Cascade ARTMAP Integrating Neural Computation and Symbolic Knowledge Processing", Neural Networks, IEEE Transactions on Volume 8, Issue 2, March 1997, pp. 237-250)(hereinafter referred to as CASCADE ARTMAP). Applicants respectfully traverse these rejections for at least the following reasons.

Applicants respectfully submit that Tan, "Profile Learning", Alam, "Text Classification", and "Cascade ARTMAP" fail to overcome the deficiencies of Register. Regarding Alam, Applicants submit that Alam merely discloses the use of a threshold comparison to determine an addressee of a fax message. Applicants submit that Alam is not directed towards document classification. Rather, as set forth in col. 4, lines 64-67, Alam is directed towards a system for converting faxes to email and routing the email containing the converted fax for subsequent retrieval by the fax's addressee.

Applicants submit that Alam does not disclose a router which is arranged to make an automatic or manual routing decision in dependence upon a comparison between a document classification confidence value and a threshold. Rather, Alam positively teaches away from such a router, as Alam seeks to rely on the fact that, inherently, email is routed automatically to the correct user. See col. 4, lines 22-23. Applicants respectfully submit that any consideration of a combination of Register and Alam must be made in this context, and, as such, the very idea of having to make a decision to route manually or automatically is completely counter-intuitive to the teaching of Alam.

Furthermore, Alam requires a comparison of a separation between a best likelihood name match with a second-best likelihood name match with a threshold. Thus, Applicants submit that Alam cannot be adapted for use in the claimed invention.

For at least the reasons set forth above, Applicants respectfully submit that one of ordinary skill in the art would not be motivated to combine the teachings of Register and Alam, as the two references provide disparate teachings. Register deals with compilation of a similarity score for predefined categories in a knowledge base and passing of the categories whose similarity scores are above a threshold to an external application, whereas Alam is directed to converting fax messages to email and routing the email to the correct addressee of the fax.

Thus, Applicants respectfully submit that the combination of Register, Alam and/or any of the other applied prior art fails to disclose or suggest a router arranged to make an automatic routing or manual routing decision in dependence upon a comparison of a confidence value and a threshold, as recited in independent claims 1 and 17.

For at least the reasons set forth above with respect to claims 1 and 17, dependent

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claims 2-4, 8, 9, 13-15 and 18 are submitted to be in condition for allowance.

Based on the above, it is respectfully submitted that this application is now in condition for allowance, and a Notice of Allowance is respectfully requested.

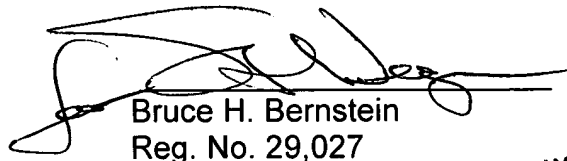
SUMMARY AND CONCLUSION

Entry and consideration of the present amendment, reconsideration of the outstanding Office Action, and allowance of the present application and all of the claims therein are respectfully requested and now believed to be appropriate. Applicants have made a sincere effort to place the present invention in condition for allowance and believe that they have now done so.

Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
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